MONTHLY WEATHER REVIEW.

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INTRODUCTION.

This REVIEW contains a general summary of the meteorological conditions which prevailed over the United States and Canada during May, 1886, based upon the reports from the regular and voluntary observers of the Signal Service and from co-operating state weather services.

Descriptions of the storms which occurred over the north Atlantic Ocean during the month are also given, and their approximate paths shown on chart i. In tracing the centres of the paths of these storms data from the reports of two hundred and four vessels have been used.

Unusually large masses of ice, both field and bergs, have been observed in the vicinity of Cape Breton and Newfoundland during the month.

On chart i are shown the approximate paths of eleven areas of low pressure which have been traced over the United States and British America. The average number of areas of low pressure for May during the last twelve years is 8.4.

The most severe local storms of the month occurred on the 11th, 12th, and 13th, during the prevalence of low area number v.

Over the country to the westward of the eighty-fifth meridian the monthly precipitation was much below the average, while in the Ohio Valley, middle Atlantic states, and over a part of the south Atlantic states there has been a marked excess.

The mean temperature has been normal or slightly below over the greater part of the country east of the Mississippi River; to the westward of the Mississippi the mean temperature has averaged from 2° to 6° above the normal, except in California, where it was about normal.

In this REVIEW will be found a tabulated statement of tornadoes, &c., prepared by Lieut. J. P. Finley, of the Signal Corps.

Chart vi exhibits curves representing results of observations, with the electrometer, upon atmospheric electricity, and under that head will be found notes referring to the same.

In the preparation of this REVIEW the following data, received up to June 20, 1886, have been used, viz., the regular tri-daily weather-charts, containing data of simultaneous observations taken at one hundred and thirty-three Signal Service stations and twenty-two Canadian stations, as telegraphed to this office; one hundred and sixty monthly journals; one hundred and fifty-seven monthly means from the former, and twenty-two monthly means from the latter; two hundred and eighty-seven monthly registers from voluntary observers; sixty-four monthly registers from United States Army post surgeons; marine records; international simultaneous observations; marine reports through the co-operation of the "New York Herald Weather Service;" abstracts of ships' logs furnished by the publishers of "The New York Maritime Register;" monthly weather reports from the New England Meteorological Society, and from the local weather services of Alabama, Georgia, Indiana, Kansas, Minnesota, Missouri, Nebraska, Ohio, and Tennessee, and of the Central Pacific Railway Company; trustworthy newspaper extracts, and special reports.

ATMOSPHERIC PRESSURE.

[*Expressed in inches and hundredths.*]

The distribution of mean atmospheric pressure for May, 1886, determined from the tri-daily telegraphic observations of the Signal Service, is shown by isobarometric lines on chart ii.

It will be seen from this chart that the pressure is greatest in the Pacific coast region and in Florida. The isobar for 30.05 indicates the region of greatest pressure and is traced along the Pacific coast. The isobar of 29.85 indicates the regions of least mean pressure; there are two of these areas, one in Arizona and New Mexico, and the other in the Saint Lawrence Valley. From New Mexico the pressure gradually increases toward the east until in Florida it reaches 30.00.

As compared with the mean pressure of the preceding month a decided decrease is shown over the whole country, except in the Rocky Mountain region and westward to the Pacific, where there was an increase, the greatest being .08 in Washington Territory. The deficiency was greatest in New England and the Saint Lawrence Valley, the mean pressure for these regions falling 0.25 below that of April. From Montana southward to Arizona, New Mexico, and Texas, the pressure differs very little from that for April.

The departures from the normal pressure at the various Signal Service stations are given in the tables of miscellaneous meteorological data, and on chart iv they are shown by lines connecting points of equal departure. The pressure for May was about normal in Washington Territory and Oregon, and on a line extending from the boundary of the United States and the British possession, at the meridian of one hundred and ten, southeastward to Florida. From this line southwestward the pressure rises above the normal, reaching 0.10 in New Mexico and Arizona, and falls below in all regions lying to the east, New England being 0.09 below the normal pressure for May.

BAROMETRIC RANGES.

The monthly barometric ranges at the various Signal Service stations are also shown in the tables of miscellaneous data; they were greatest at stations in the Lake region, New England, and along the Atlantic coast, and least in California, Arizona, New Mexico, and Texas.

The following are some of the extreme monthly ranges:

Greatest.	Inch.	Least.	Inch.
Eastport, Maine	0.99	San Diego, California	0.25
Portland, Maine	0.91	Los Angeles, California	0.26
Cape Hatteras, North Carolina	0.91	Key West, Florida	0.27
Boston, Massachusetts	0.89	Fort Apache, Arizona	0.29
Kitty Hawk, North Carolina	0.89	Prescott, Arizona	0.29
Mount Washington, New Hampshire	0.89	Cedar Keys, Florida	0.34
Chincoteague, Virginia	0.88	Sanford, Florida	0.36

AREAS OF HIGH PRESSURE.

Eight areas of high pressure appeared within the limits of, or near, the stations of observation during the month of May. Of the eight areas traced, but one pursued the normal southeasterly course. Three of these areas passed eastward north of the Lake region, and four were first observed on the Pacific